



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/828,977

04/21/2004

Hiroshi Kanto

9683/188

5406

27879 7590 07/18/2007  
INDIANAPOLIS OFFICE 27879  
BRINKS HOFER GILSON & LIONE  
ONE INDIANA SQUARE, SUITE 1600  
INDIANAPOLIS, IN 46204-2033

EXAMINER

FOX, BRYAN J

ART UNIT

PAPER NUMBER

2617

MAIL DATE

DELIVERY MODE

07/18/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/828,977	<b>Applicant(s)</b> KANTO ET AL.	
	<b>Examiner</b> Bryan J. Fox	<b>Art Unit</b> 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 16 April 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 5-38 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 5-13, 18-30 and 32 is/are allowed.
- 6) ☒ Claim(s) 14-17 and 33-38 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 14-17 and 31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 14 recites the limitation "said first mobile communication network" in lines 4-5 and 21. There is insufficient antecedent basis for this limitation in the claim.

Claim 14 recites the limitation "said second mobile communication network" in lines 21-22. There is insufficient antecedent basis for this limitation in the claim.

Claim 17 recites the limitation "said first mobile communication network" in lines 2 and 3-4. There is insufficient antecedent basis for this limitation in the claim.

Claim 17 recites the limitation "said second mobile communication network" in lines 4-5 and 6. There is insufficient antecedent basis for this limitation in the claim.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 33 and 36-38 are rejected under 35 U.S.C. 102(e) as being anticipated by Kransmo.

Regarding claim 33, Kransmo discloses a system with a mobile station that may comprise a dual mode mobile terminal, capable of being used in both 3G and 2G networks (see column 3, lines 62-67). The control channel information is provided regarding a 2G communication system within a downlink control channel of the 3G communication system to the wireless terminal (see column 5, lines 21-36) and the MS takes measurements of the carrier channels such as signal strength, and also determines if the correct cell has been selected (see column 4, lines 20-29), which reads on the claimed, "registering a mobile terminal with a second mobile communication network in response to registration with a first mobile communication network being unavailable; receiving, with said mobile terminal over said second mobile communication network, registration possibility information that includes an indication of whether registration to said first mobile network is possible; said mobile terminal sensing a change in location of said mobile terminal; said mobile terminal, responsive to said change in location, checking said registration possibility information to confirm registration to said first mobile communication network is available; and said mobile terminal attempting to register said mobile terminal to said first mobile communication network in response to confirmation by said mobile terminal that said registration possibility information indicates registration to said first mobile communication network is available," wherein the registration possibility confirmation information corresponds to the channel information such as signal strength.

Regarding claim 36, Kransmo discloses the use of 3G and 2G (see Kransmo column 3, line 62 – column 4, line 9), which reads on the claimed, “registering to the second mobile communication network comprises registering to a second generation mobile communication network, and attempting to register comprises attempting to register to a third generation mobile communication network.”

Regarding claim 37, Kransmo discloses the control channel information is provided regarding a 2G communication system within a downlink control channel of the 3G communication system to the wireless terminal (see Kransmo column 5, lines 21-36) and the MS takes measurements of the carrier channels such as signal strength, and also determines if the correct cell has been selected (see Kransmo column 4, lines 20-29), which reads on the claimed, “receiving, with said mobile terminal over said second mobile communication network, registration possibility information comprises storing said registration possibility information in a memory included in said mobile terminal, and checking said registration possibility information comprises accessing said stored registration possibility information in said memory.”

Regarding claim 38, Kransmo discloses the control channel information is provided regarding a 2G communication system within a downlink control channel of the 3G communication system to the wireless terminal (see Kransmo column 5, lines 21-36) and the MS takes measurements of the carrier channels such as signal strength, and also determines if the correct cell has been selected (see Kransmo column 4, lines 20-29), which reads on the claimed, “registering a mobile terminal with a second mobile communication network in response to registration with a first mobile communication

Art Unit: 2617

network being unavailable comprises first attempting to register with said first mobile communication network and then registering with said second mobile communication network."

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 14-17 and 34-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kransmo in view of Lamb et al (US006697620B1).

Regarding claim 14, Kransmo discloses a system with a mobile station that may comprise a dual mode mobile terminal, capable of being used in both 3G and 2G networks (see column 3, lines 62-67), which reads on the claimed, "third generation mobile communication network that includes a first location management device, wherein said first location management device is operable to manage location information of received from mobile terminals that opt to register to said first mobile

Art Unit: 2617

communication network; a second generation mobile communication network that includes a second location management device and a base station, said second location management device operable to manage location information received from mobile terminals that elect to register to said second generation mobile communication network," wherein the HLR maintaining a register of information for all MSs currently being served by the network reads on the location management device. The control channel information is provided regarding a 2G communication system within a downlink control channel of the 3G communication system to the wireless terminal (see column 5, lines 21-36) and the MS takes measurements of the carrier channels such as signal strength, and also determines if the correct cell has been selected (see column 4, lines 20-29), which reads on the claimed, "said base station positioned within said third generation mobile communication network, wherein said base station is operable to transmit, for receipt by a mobile terminal, registration possibility information indicating that it is possible for said mobile terminal to register to said third generation mobile communication network." Kransmo fails to disclose a management device coupled with said first mobile communication network and said second mobile communication network, said management device operable to store location registration data correlated with a mobile terminal identifier for each of said mobile terminals, said management device operable to selectively update said location registration data in response to receipt from each of said mobile terminals of a notification that a respective mobile terminal previously opted for and completed registration of said respective mobile

terminal to one of said first mobile communication network or said second mobile communication network.

In a similar field of endeavor, Lamb et al disclose a universal location service register that has access to a database that stores information about subscribers to the networks serviced by the ULSR, where the information in the database enables the ULSR to provide mobility management and authentication functions for all networks that the ULSR supports. When a terminal roams, it sends a registration request to the new network, and the MSC in the new network notifies the ULSR that the mobile phone has requested registration. If the terminal is authorized, the ULSR updates the database to reflect that the terminal is currently registered in the new network (see column 4, line 33 – column 5, line 12), which reads on the claimed, “management device further coupled with said third generation mobile communication network and said second generation mobile communication network, said management device operable to store location registration data correlated with a mobile terminal identifier for each of said mobile terminals, said management device further operable to selectively update said location registration data in response to receipt from each of said mobile terminals of a notification that a respective mobile terminal previously opted for and completed registration of said respective mobile terminal to one of said first mobile communication network or said second mobile communication network.”

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Kransmo with Lamb et al to include the above ULSR in order to



eliminate the need for associating each MSC with its own HLR and AuC as suggested by Lamb et al (see column 2, lines 47-63).

Regarding claim 15, Kransmo fails to disclose said management device is operable to store said location registration data correlated with a mobile terminal identifier in a management table.

In a similar field of endeavor, Lamb et al disclose a ULSR that stores the location at which the user is currently registered (see column 4, lines 33-44), which reads on the claimed, "said management device is operable to store said location registration data correlated with a mobile terminal identifier in a management table."

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Kransmo with Lamb et al to include the above ULSR in order to eliminate the need for associating each MSC with its own HLR and AuC as suggested by Lamb et al (see column 2, lines 47-63).

Regarding claim 16, Kransmo fails to disclose said management device is operable, in response to a request related to a specified mobile terminal, to specify a mobile communication network to which said specified mobile terminal is registered based on said stored location registration data correlated with a mobile terminal identifier.

In a similar field of endeavor, Lamb et al disclose when a network receives an incoming call for a user, the MSC of the home network sends a location request to the ULSR, and the ULSR responds with the routing information of the terminal in the roaming network (see column 7, lines 5-54), which reads on the claimed, "said

management device is operable, in response to a request related to a specified mobile terminal, to specify a mobile communication network to which said specified mobile terminal is registered based on said stored location registration data correlated with a mobile terminal identifier.”

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Kransmo with Lamb et al to include the above ULSR in order to eliminate the need for associating each MSC with its own HLR and AuC as suggested by Lamb et al (see column 2, lines 47-63).

Regarding claim 17, Kransmo fails to disclose said management device is operable to receive data from said first mobile communication network when said notification is from a mobile terminal registered with said first mobile communication network, and said management device is operable to receive data from said second mobile communication network when said notification is from a mobile terminal registered with said second mobile communication network.

In a similar field of endeavor, Lamb et al disclose When a terminal roams, it sends a registration request to the new network, and the MSC in the new network notifies the ULSR that the mobile phone has requested registration, which reads on the claimed, “said management device is operable to receive data from said first mobile communication network when said notification is from a mobile terminal registered with said first mobile communication network, and said management device is operable to receive data from said second mobile communication network when said notification is from a mobile terminal registered with said second mobile communication network.”

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Kransmo with Lamb et al to include the above ULSR in order to eliminate the need for associating each MSC with its own HLR and AuC as suggested by Lamb et al (see column 2, lines 47-63).

Regarding claim 34, Kransmo discloses a network with an HLR that maintains a register of information for all MSs currently being served by the terminating network (see column 3, lines 35-50), which reads on the claimed, "said mobile terminal attempting to register said mobile terminal comprises said mobile terminal transmitting a location registration message over said first mobile communication network to a location management device in said first mobile communication network to register in said first mobile communication network." Kransmo fails to disclose said mobile terminal transmitting a notification message to a management device in communication with both said first mobile communication network and said second mobile communication network, said notification message indicative that registration has been successfully changed to said first mobile communication network.

In a similar field of endeavor, Lamb et al disclose a universal location service register that has access to a database that stores information about subscribers to the networks serviced by the ULSR, where the information in the database enables the ULSR to provide mobility management and authentication functions for all networks that the ULSR supports. When a terminal roams, it sends a registration request to the new network, and the MSC in the new network notifies the ULSR that the mobile phone has requested registration. If the terminal is authorized, the ULSR updates the database to

Art Unit: 2617

reflect that the terminal is currently registered in the new network (see column 4, line 33 – column 5, line 12), which reads on the claimed, “said mobile terminal transmitting a notification message to a management device in communication with both said first mobile communication network and said second mobile communication network, said notification message indicative that registration has been successfully changed to said first mobile communication network.”

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Kransmo with Lamb et al to include the above ULSR in order to eliminate the need for associating each MSC with its own HLR and AuC as suggested by Lamb et al (see column 2, lines 47-63).

Regarding claim 35, Kransmo fails to disclose transmitting a location registration message comprises transmitting a mobile terminal identifier and location information of said mobile terminal to said location management device, and transmitting a notification message comprises transmitting a terminal identifier of said mobile terminal and a control code to activate said first mobile communication network.

In a similar field of endeavor, Lamb et al disclose a universal location service register that has access to a database that stores information about subscribers to the networks serviced by the ULSR, where the information in the database enables the ULSR to provide mobility management and authentication functions for all networks that the ULSR supports. When a terminal roams, it sends a registration request to the new network, and the MSC in the new network notifies the ULSR that the mobile phone has requested registration. If the terminal is authorized, the ULSR updates the database to

reflect that the terminal is currently registered in the new network (see column 4, line 33 – column 5, line 12), which reads on the claimed, “transmitting a location registration message comprises transmitting a mobile terminal identifier and location information of said mobile terminal to said location management device, and transmitting a notification message comprises transmitting a terminal identifier of said mobile terminal and a control code to activate said first mobile communication network.”

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Kransmo with Lamb et al to include the above ULSR in order to eliminate the need for associating each MSC with its own HLR and AuC as suggested by Lamb et al (see column 2, lines 47-63).

Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kransmo in view of Lamb as applied to claim 14 above, and further in view of what was well known in the art (see MPEP 2144.03).

Regarding claim 31, the combination of Kransmo and Lamb et al fails to expressly disclose said notification and said location information are different transmissions from said mobile terminal.

The Examiner takes Official Notice that having notification and location information be different transmissions from said mobile terminal was well known in the art at the time of the invention.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the combination of Kransmo and Lamb et al to include the above different transmissions in order to process the information at the appropriate time.

***Allowable Subject Matter***

Claims 5-13, 18-30, and 32 are allowed.

The following is an examiner's statement of reasons for allowance: the Applicant's arguments filed in the Amendment filed on April 16, 2007 are persuasive.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Response to Arguments***

The Applicant argues none of the cited references describe management of location registration information received from a mobile terminal with a location management device, and selective update of location registration data with a management device in response to receipt of a notification from each of said mobile terminals. The Examiner respectfully disagrees. Lamb et al disclose a universal location service register that has access to a database that stores information about subscribers to the networks serviced by the ULSR, where the information in the database enables the ULSR to provide mobility management and authentication functions for all networks that the ULSR supports. When a terminal roams, it sends a registration request to the new network, and the MSC in the new network notifies the

ULSR that the mobile phone has requested registration. If the terminal is authorized, the ULSR updates the database to reflect that the terminal is currently registered in the new network (see column 4, line 33 – column 5, line 12), fulfilling the claimed limitations.

The Applicant further argues none of the cited references teach or suggest a base station included in a second generation mobile communication network that is operable to transmit registration possibility information for registration to a third generation mobile communication network. The Examiner respectfully disagrees. Kransmo discloses the control channel information is provided regarding a 2G communication system within a downlink control channel of the 3G communication system to the wireless terminal (see Kransmo column 5, lines 21-36). This fulfills the claimed limitations.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bryan J. Fox whose telephone number is (571) 272-7908. The examiner can normally be reached on Monday through Friday 9am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles N. Appiah can be reached on (571) 272-7904. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Bryan Fox  
July 9, 2007



CHARLES N. APPIAH  
SUPERVISORY PATENT EXAMINER